Regional Routing Model Review:

B) A Multimodal Freight Routing Model

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Generating Commodity Flows for the Base Case: Key Issues

A) Estimating Annual O-D-C Movements:

Rail and Water Movements can be Aggregated from Waybills and Waterborne commerce data
(Note: Waybills are based on expanded samples)

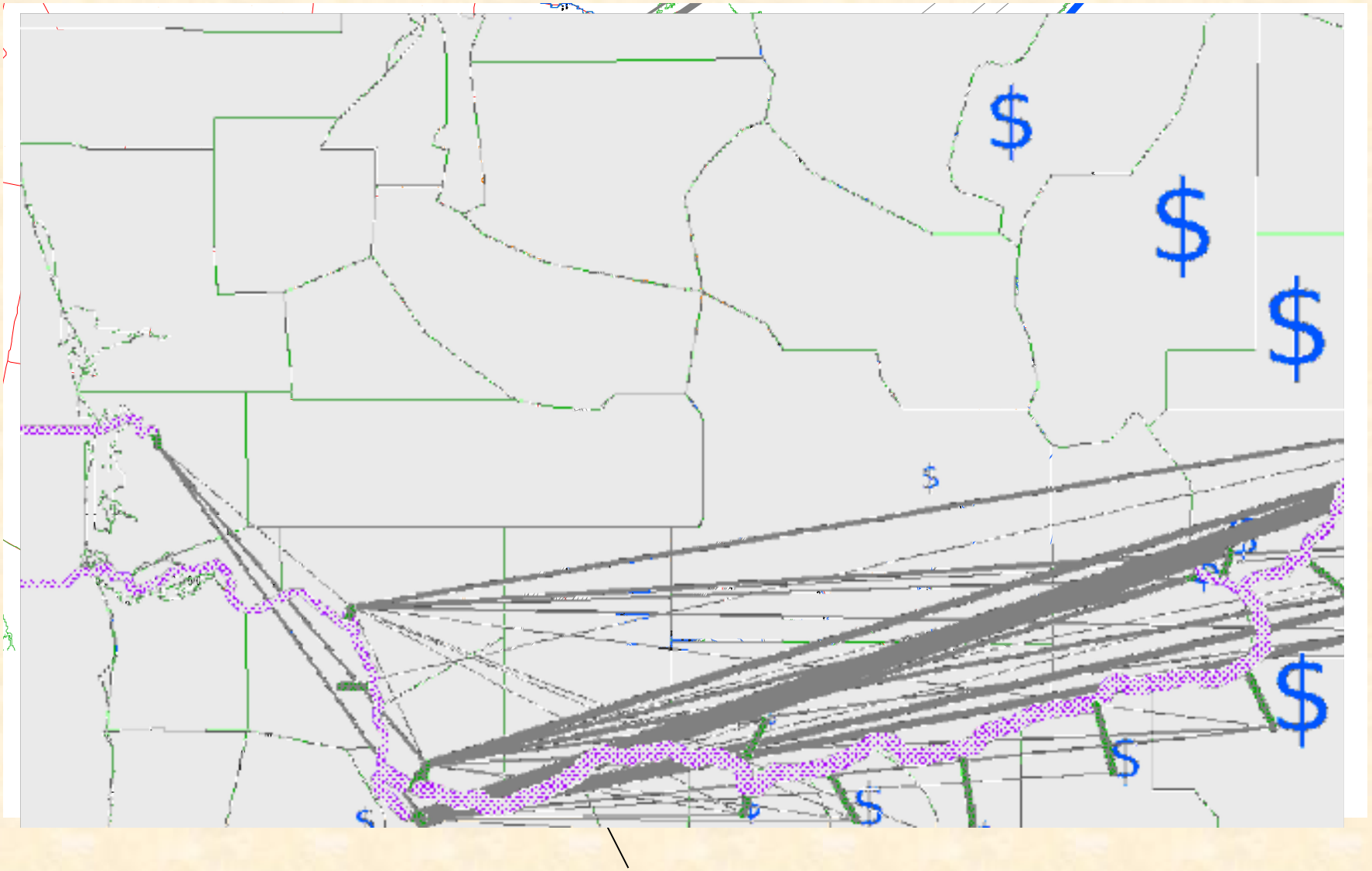
Truck Flow Data is Limited at Best – it Needs to Be Simulated

Data on truck drays is limited, making it a challenge not only assign water and rail flows to correct county origins/destinat on a fully nationwide basis, but also to extract remaining tru movements.

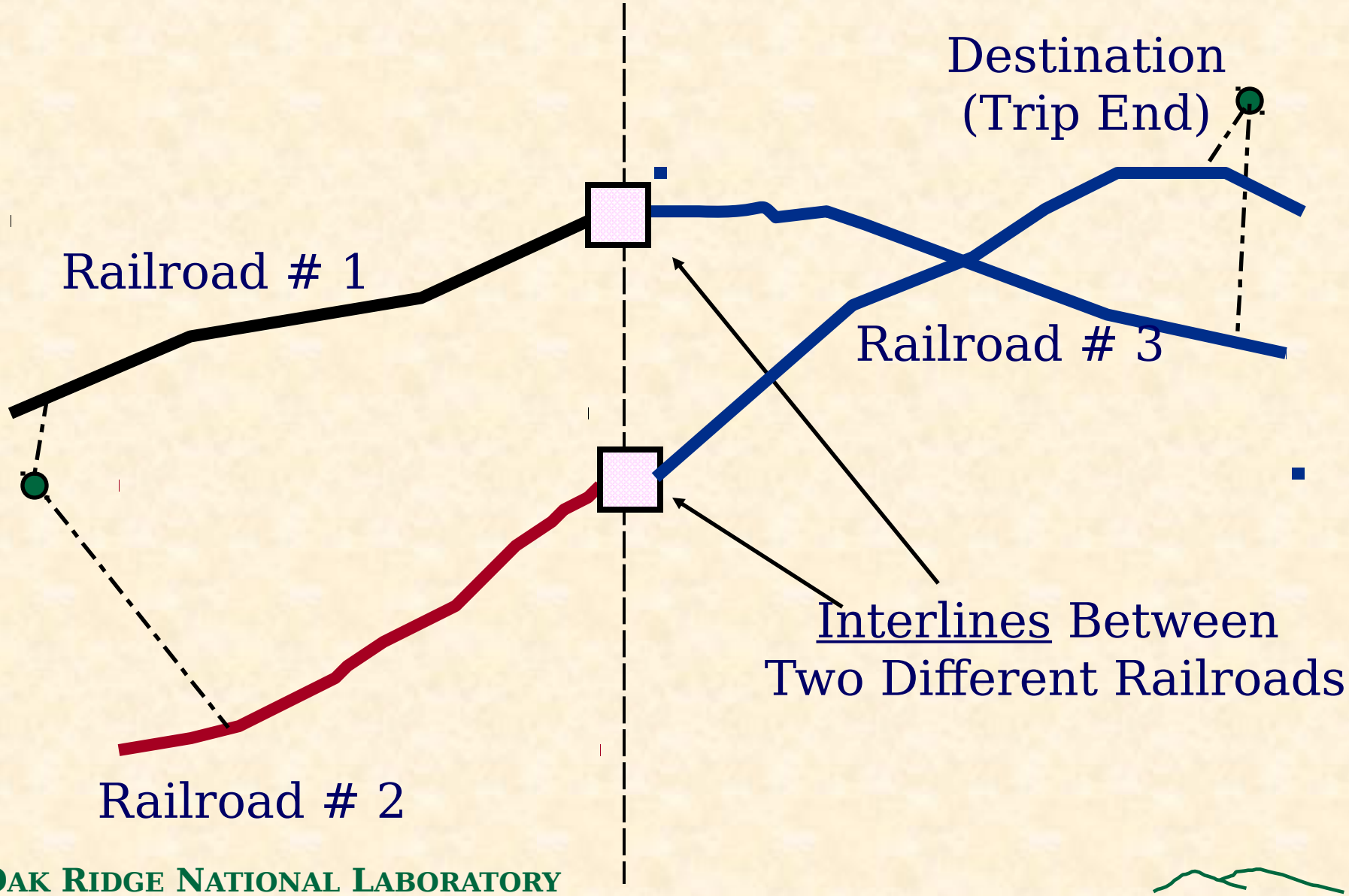
B) Traffic Routing

Rail Routing is the most challenging, requiring detailed information on the railroads involved and on their interlining practices.

Simulated Wheat Flows, 2002 (Preliminary)



Which Railroad Will The Freight Pass Over?



Modeling Truck Movements

truck tons generated (O^m)= total tons produ
– (rail tons shipped + water tons ship
+on farm consumption)

truck tons received (D^m) = total tons consumed
– (rail tons received + water tons

$$X_{ij}^m = F\{ O_i^m, D_j^m , C_{ij}^m , Z_{ij}^m \}$$

$$\sum_j X_{ij}^m = O_i^m \quad \text{for all i producing counties}$$

$$\sum_j X_{ij}^m = D_j^m \quad \text{for all j receiving counties}$$